

### Abstract

An X-ray optical system for combinatorial screening comprising a plurality of samples which are disposed on a flat plate (8;23) as a sample library (3;22), with an X-ray source (1) from which X-ray radiation (2) is guided to a sample under investigation, and an X-ray detector (7) for receiving radiation (6) diffracted or scattered on the sample, wherein a sample carrier is provided for displacing the flat plate (8;23) in its xy-plane and perpendicular thereto along a z-direction, is characterized in that the sample carrier is designed such that it can rotate the flat plate (8; 23) about a first axis (9) parallel to the z-direction and also about a second axis (10) which extends through the xy-plane. This permits rapid sequential measurement of the samples of a sample library, wherein a large variety of X-ray analyses can be applied to the samples.